

Title (en)

Front light device, liquid crystal display device and personal digital assistant

Title (de)

Vorderflächebeleuchtungsvorrichtung, Flüssigkristallanzeigevorrichtung und persönlicher digitaler Assistent

Title (fr)

Dispositif d'illumination frontal, dispositif d'affichage à cristaux liquides et assistant numérique personnel

Publication

EP 1870635 A3 20080102 (EN)

Application

EP 07115794 A 20010326

Priority

- EP 01107525 A 20010326
- JP 2000097030 A 20000331
- JP 2001021844 A 20010130

Abstract (en)

[origin: EP1139015A1] A compact and light weight front light, a reflective liquid crystal display device and a personal digital assistant providing image display of uniform brightness with high efficiency are provided. The front light includes a main optical guide plate (1) and a second optical guide plate (2). The second optical guide plate is arranged at an end portion of the main optical guide plate along the widthwise direction, and on an end surface opposite to an end surface facing the main optical guide plate, a plurality of prism-shaped grooves (12) are formed along the longitudinal direction, extending in the depth direction. The front light further includes a point light source (3) arranged at an end in the longitudinal direction of the second optical guide plate, and a reflective film (11) covering the surface of the prism-shaped grooves. <IMAGE>

IPC 8 full level

F21V 8/00 (2006.01); **G02B 6/00** (2006.01); **G02F 1/1335** (2006.01); **G02F 1/13357** (2006.01); **G09F 9/00** (2006.01); **F21Y 101/02** (2006.01)

CPC (source: EP KR US)

G02B 6/0018 (2013.01 - EP US); **G02B 6/002** (2013.01 - EP US); **G02B 6/0028** (2013.01 - EP US); **G02B 6/0036** (2013.01 - EP US); **G02B 6/0038** (2013.01 - EP US); **G02B 6/0061** (2013.01 - EP US); **G02F 1/1335** (2013.01 - KR)

Citation (search report)

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- [Y] WO 9617207 A1 19960606 - PRECISION LAMP INC [US]
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Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 1139015 A1 20011004; **EP 1139015 B1 20081001**; CN 1204442 C 20050601; CN 1319779 A 20011031; DE 60135944 D1 20081113; EP 1870635 A2 20071226; EP 1870635 A3 20080102; JP 2001345006 A 20011214; JP 3301752 B2 20020715; KR 100405927 B1 20031114; KR 20010095035 A 20011103; TW 550398 B 20030901; US 2001035927 A1 20011101; US 6636283 B2 20031021

DOCDB simple family (application)

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